

Orion MRL

Commercial Elevator

Owner's Manual

savaria®

IMPORTANT

Ensure that only an authorized Savaria Dealer installs and services the Orion MRL Commercial Elevator. Under no circumstances is anyone other than a dealer with Savaria training and authorization to install, adjust, service or modify any mechanical or electrical device on this equipment. Failure to follow this warning can result in safety system compromises or defeat; this can result in serious injury or death. Savaria accepts no liability for property damage, warranty claims or personal injury, including death, in this circumstance.

Passenger safety is the result of countless details in the equipment's design, manufacture, and installation. After installation, reliable operation and continual safe operation requires regular service and inspection at least twice per year, or more frequently where usage, environment, or local jurisdiction requires. As the Owner, you are responsible for ensuring that regular service and inspections occur in a timely manner.

Refer to this manual for specifications, operating instructions and maintenance of the Orion MRL Commercial Elevator.

Upon completion of installation, the dealer must provide you with the following information and ensure it is recorded in this manual. In addition, either the dealer or you must keep any service and/or maintenance records in the Maintenance Record section of this manual.

WARRANTY

Ensure your Savaria Dealer provides you with a copy of the manufacturer's limited parts warranty and documentation relating to any Dealer labour warranty.

FOR OWNER'S RECORDS

Customer Name: _____

Installing Dealer: _____

Dealer's Telephone Number: _____

Date Installed: _____

Serial/Job Number: _____

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DANGER

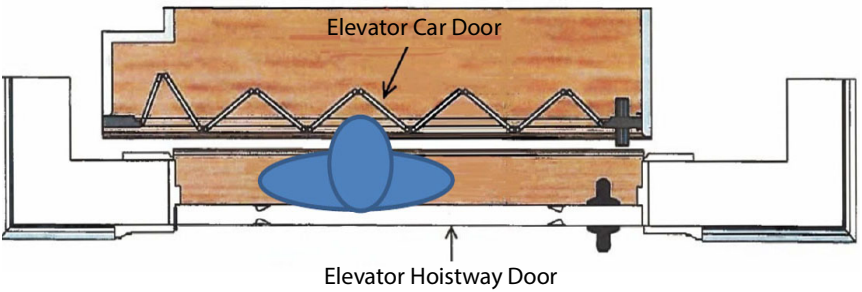
This product is designed and manufactured to exact specifications. Modifications to this product in any way can be dangerous and will void the warranty.

1. SAFETY INSTRUCTIONS

To ensure safe operation of this unit, pay careful attention to the important notes below.

To Ensure Safety

- Read this manual carefully before using the equipment.
- To prevent accidents, adhere strictly to the instructions and keep clear of moving parts at all times.
- Be aware of hazardous space between the hall door and car, especially for small children.



- Follow instructions on all equipment labels at all times. Replace any damaged labels immediately.
- Ensure that only qualified personnel perform maintenance and service on the unit.
- When replacing parts, be sure that only genuine Savaria parts are used.
- This unit is intended for use by a mature person who understands its proper operation as set out in this manual.

> **WARNING**
>
> At no time should people under the age of 16 use the lift while unsupervised

- Prior to operation, make sure that:
  - All doors and gates are locked and secure.
  - All areas in and around the lift are clear of any obstructions.
  - All lights are functioning properly.
- Test your keys and emergency stop button every month.

2. FEATURES

Cab Operating Panel (COP) Buttons

The Cab Operating Panel (COP) buttons facilitate the UP/DOWN movement of the cab between landings. Once the selected landing button is pressed, the cab will automatically move to the landing. The cab will stop when the selected landing is reached.

Door Open/Close Buttons

The elevator door will close automatically after a preset adjustable time in seconds. These buttons can be pressed to open/close the door when the cab is at a landing.

Alarm Button

This button can be pressed at any time to sound the alarm in case of an emergency.

Run/Stop Keyswitch

In the **STOP** position, the cab stops and the alarm buzzer is activated. This key switch must be in the **RUN** position for normal operation.

Phase 2 Fire Service Keyswitch

The keyswitch in the **ON** position enables cab controls as per Code B44 2.27. The keyswitch in the **OFF** position allows for normal lift operation. The keyswitch in the **HOLD** position holds the doors open when the cab is at a landing.

Call Cancel Button (Optional)

Used with Fire Service 2; when pressed, this button cancels all registered calls. The cab will stop at the next landing.



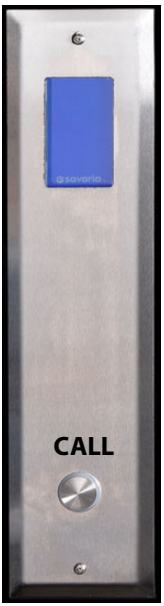
Figure 1: Keyed COP

Help (Phone) Button - Optional (Figure 1-F)
This button can be pressed at any time to activate the optional hands-free phone in case of an emergency. The red light above the speaker will come on when two-way communication has been established. For units that have a standard hand-held phone, it is located in a separate phone cabinet in the cab.

Emergency Light (Figure 1-G)
The COP emergency light remains **ON** in the event of a main power failure. The emergency light uses a Battery Back-Up system with an automatic recharger.

Handrail
A single handrail is mounted below the COP.

Landing Hall Call Station Controls



Hall Call Stations are installed at all landings to move the cab to the landing from which you are calling. Press the **CALL** button to call the cab to your landing. The position indicator displays the landing the cab is at. An optional keyswitch limits the elevator's use to authorized persons only.

Landing Door Lock
The Landing Door lock prevents movement of the cab unless the door is in the closed and locked position. If the door is not completely closed, the cab will not move.

Emergency Battery Operation
In the event of a building power failure, the door system is provided with a temporary power back-up system to continue the opening operation for a number of times. On resuming normal building power, the back-up system will turn **OFF** and begin automatically recharging.

3. TECHNICAL SPECIFICATIONS

Specification	Specification Data
Load capacity	1400 lb (635 kg)
Rated speed	25 ft/min (0.13 m/s) nominal 30 ft/min (0.15 m/s) nominal
Power supply	208 volt, three phase, 30 amps, 60 Hz or 240 volt, single phase, 40 amps, 60 Hz
Lighting supply	110 volts, 60 cycle, 15 amps
Drive system	Counterweight traction with slack cable safety device Geared motor, 1:1 sheave Two 3/8" diameter steel cables, Rope wedge sockets
Operating temperature	-10 °C to +40 °C (+14 °F to +104 °F)
Cab sizes	42" wide x 54" deep (1067 mm x 1372 mm) 48" wide x 54" deep (1219 mm x 1372 mm) 42" wide x 60" deep (1067 mm x 1524 mm) 51" wide x 51" deep (1295 mm x 1295 mm)
Cab panel finish	Steel panel cab with optional laminates
Maximum travel	25 ft (7.6 m)
Control system	Automatic user interface; Programmable Logic Controller (PLC)
Distance between 2 landings	18" (457 mm) minimum
Noise level (typical installation)	54 dBA (up direction); 53 dBA (down direction) Measured at a height equal to motor, distance of 1m, in front of motor, no hoistway
Daily cycle	Normal: 200 Maximum starts in 1 hour on standard installation: 45
Levels serviced	Up to 6 stops
Pit depth required	14" (356 mm) minimum for 25 ft/min (0.13 m/s) 17" (432 mm) minimum for 30 ft/min (0.15 m/s) 96" (2438 mm) maximum
Overhead clearance (minimum)	108" (2743 mm) minimum for 25 ft/min (0.13 m/s) 111" (2819 mm) minimum for 30 ft/min (0.15 m/s)
Control system	Single automatic push button
Floor selection	Magnetic selector

Specification	Specification Data
Hall station and control panel finish	Rectangular stainless steel (standard) or brass (optional)
Standard features	8 lb/ft T-rail system Anti-creep device Architectural white ceiling Automatic cab ON/OFF lighting Car top stop switch Data plates, capacity tags and rope tags Digital floor and directional indicator Stop key switch and alarm buttons Emergency battery back-up for lighting, alarm and emergency lowering Floor specific battery lowering Illuminated cab operating buttons Magnetic floor selection, stopping and re-leveling Slack rope safety switch (manual reset) Pit prop (for maintenance) Car top prop and safety rail(for maintenance) Pit switch (emergency stop) LED lights in stainless steel Recessed plywood floor Upper and lower terminal limits Overspeed governor Two-speed sliding doors for drywall or masonry hoistway finish
Options	Two-speed steel doors with infrared closing sensors in black, architectural white or stainless steel Steel panels with plastic laminate in a variety of colors 90 degree entry/exit cab Automatic cab operator and hoistway door operator Automatic home landing to pre-selected floor Brass COP, hall call stations, handrail and recessed down lights Firefighter service - phase 1 and 2 (dependable on applicable code year) Hands-free telephone Recessed stainless steel or brass telephone cabinet Savaria Link remote monitoring Counterweight safeties

4. USING THE DEVICE

Operating from the Landing Controls

> **NOTICE**
> When using the landing controls, the cab can only be moved (called) to the level from which you are calling. When using the COP buttons in the cab, the cab can be moved to any level.

To call the elevator to the appropriate level:

1. Press the **CALL** button. The cab will automatically stop at your landing.
2. When the elevator reaches the landing, the sliding doors will open automatically. Enter the cab. The doors will close behind you after a few seconds. Once inside the cab, lock the wheelchair wheels.

> **WARNING**
> Wheelchair wheels must be locked at all times when the elevator is moving.

Operating From The Cop Controls

1. If sitting in the cab in a wheelchair, lock the wheelchair wheels. If standing in the cab, hold on to the handrail.
2. Press the appropriate landing button to "send" the cab to the desired landing.
3. When the elevator reaches the landing, the door will "chime" and the sliding doors will open automatically. Exit the cab. The doors will close behind you after a few seconds.

> **WARNING**
> Wheelchair wheels must be locked at all times when the elevator is moving.

Door Open Button

The Door Open button is located on the Car Operating Panel (COP).

When the elevator is at a landing level, the doors can be opened by pressing the Door Open button. Normally the doors will have opened and already closed automatically. The Door Open button allows the door to be reopened.



Figure 3
Door Open Button

Phone Monitoring (If Applicable)

Depending on what code your elevator was ordered and inspected under, there may be a phone monitor.

If provided, the phone monitor will be located at the main landing. There is a small red Elevator Communications Failure light and a beeper as shown below.

If the phone line is not functioning, the small red light will flash and the beeper will sound to warn users that the emergency phone in the car is not functioning.

Contact your Authorized Dealer as soon as possible.

NOTE: There is an alarm silence key provided to turn off the beeper.



Figure 3
Phone Monitor

5. EMERGENCY OPERATION

Emergency Battery Lowering

In the event of a power failure, the elevator is equipped with a Battery Back-Up system that allows you to lower the elevator from the inside of the cab. This device operates on batteries and is only activated if a main power supply failure occurs. The operation is as follows:

1 Press any Landing button below the floor where the elevator is located. The elevator will descend and stop at the selected landing.

2 Upon arrival at the desired floor, the landing doors will open automatically and you can exit the cab.

Emergency Light

In the event of a main power failure, the emergency cab light will light automatically.

Emergency Hands-free Telephone (Optional)

1 If your lift is equipped with an Emergency Hands-Free Telephone, press and hold down the button in the telephone box to activate the phone line. A short time delay (adjustable by the installing technician) will occur.

2 Release the button once the call is picked up by the telephone line.

The system will automatically dial out to a preprogrammed telephone number as set up by the installing technician.

Manual Lowering

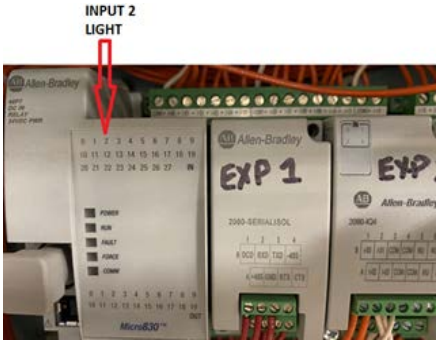
In the event of a power failure, the UPS lowers the cab to the next landing and opens the doors. If the UPS fails, use the telephone to call for help. The manual lowering device can then be used from outside the elevator to lower the cab to the closest landing.

1 Instruct the passenger(s) in the elevator to stay well back from the elevator door.

2 Press the red STOP switch in the door buck cabinet or on the side of the controller cabinet.

3 See the Input 2 light on the Allan Bradley PLC (See image below), if the light is off, proceed to step 4.

If the light is on, turn off the UPS and obtain the special elevator door release key and go to the floor shown in the display on the hall call. Open the landing door MAXIMUM 6 inches to check if elevator cab is at this location. If elevator cab is at this location open landing and car doors enough to remove passenger. Close door after passengers have exited the cabin.



4 Use the manual lowering device to lower the cab.

a. Open the door buck cabinet or the manual lowering access box.
b. Locate the manual lowering pendant.
c. Open the landing door where the door buck is located, do not enter to the hoistway. If the unit does not have a door buck, open the most convenient landing door. Ensure you can see either the cabin, counterweight or OSG from the landing.
d. Pull and hold the OSG reset handle.

e. Press COM and DN buttons to lower the cab and continue holding the OSG reset handle. The cabin will move down at a speed of 15.6 in/min. Look the cabin or counterweight to ensure the cabin is lowering. If looking at the OSG, it should be rotating. Do not enter to the hoistway. If the cabin is not lowering, do the following for 10 seconds: Press the COM button and insert a screw driver through the hole on the pendant marked with “Mechanic use only”. Inspect if the cabin moves up.
Try again to lower the cab pressing COM and DN buttons and holding the OSG reset handle. If the cab is not lowering, do not use this system to evacuate the passenger(s).

f. Monitor DC Relay Input 2 light on the Allan Bradley PLC.

g. Once DC relay input 2 light is on this indicates elevator is at the next available floor, release the COM and DN buttons to stop movement.

h. Turn off the battery back up (UPS) inside controller so all lights on controller go off

5 Obtain the special elevator door release key and go to the floor shown in the display on the hall call, without entering to the hoistway see inside to confirm the cabin is at the floor shown on display. Open the landing door MAXIMUM of 6 inches to check if elevator cab is at this location. If elevator cab is at this location open landing and car doors enough to remove passenger.

6 f the elevator is not at that location, go to the closest floors until car is located. Open the landing door maximum 6 inches to check if the cab is on the landing.

7 After the passenger(s) have exited the cab, make sure the landing door is closed and lock the door behind you.

8 Return the special elevator door release key to its original storage area.

9 Call your local service provider to inspect the elevator.

> **NOTICE**
>
> After use of any emergency function (access key or manual lowering device), ensure that all doors/gates are secure and locked. While the emergency function is in use, DO NOT leave the area unattended.

Overspeed Governor Reset

In the event of a power failure, the Overspeed Governor (OSG) may trip and will need to be reset. Contact your Authorized Dealer for assistance.

6. MAINTENANCE

Regular maintenance will keep your Orion MRL in proper operating condition. As the owner of this elevator, you are responsible for making sure that maintenance and upkeep are done on a regularly scheduled basis.

IMPORTANT: Please test the phone in your elevator during every maintenance. If the phone is inactive, please shut down the elevator until the phone line is active.

NOTICE

Elevator maintenance is recommended to be performed by an authorized Savaria dealer every 3 months and must be performed every 6 months. Units installed in adverse environments will require additional maintenance on a monthly basis.

WARNING

Be sure to use all elevator safety features as needed (such as the pit prop, car top prop and car top safety rail) to ensure your safety during maintenance.

To ensure proper operating condition of your unit, the items listed below are recommended to be performed every 3 months and must be performed every 6 months by an **Authorized Savaria Dealer**. Additional inspections may be required depending on usage.

1. Tighten all rail and cab fastening bolts.
2. Lubricate the counterweight rails with a light grease, such as white lithium.
3. Inspect the traveling cable for wear. Replace if any cuts or damage to the jacket is evident.
4. Inspect the elevator cables for wear or damage and replace if necessary. Always replace the safety washers at the swaged end of the cable when replacing cables. The washers are provided with replacement cables.
5. Inspect the safety washers at the swaged end of the elevator cables. Put the elevator on slack rope high enough so you can safely get under the elevator. Activate the manual lowering device so there is enough slack in the rope to pull the rope with the swag fitting down to view the washer. Replace the washer if there is any visible damage.
6. Inspect the OSG cables for wear or damage and replace if necessary.
7. Replace the batteries in the control panel as indicated on the battery label.
8. Activate and test the safety mechanism.
9. Check that the phone is functioning properly.

MANUAL LOWERING MAINTENANCE

Complete shutdown inspection:

Every time the elevator is under maintenance inspect the Manual lowering system.

While performing the inspection, power off the controller and the UPS.

Belt inspection:

Look for any signs of belt wear or damage. Belt should be replaced if show any signs of fraying, cracking, unusual wear or loss of teeth.

Inspect the tension on the belt using a pencil tension tester. Use a straight edge across the belt, place the tool in the center and push. The force on the pencil must be 2 lb under a displacement of 0.1". The recommended pencil tension tester is: Brand: Gates, Product #74010076



Pulley inspection:

Check pulleys for signs of unusual wear or obvious signs of damage. Inspect proper alignment and mounting, place a level on top of both pulleys and ensure they are at the same level:



MANUAL LOWERING TEST PROCEDURE

To test the operation of the manual lowering system the UPS must be on. Follow these steps to operate the system**:**

1. Locate the manual lowering pendant in the door buck cabinet OR the manual lowering box (if the controller is located remotely).
2. Use the pendant to lower the cab following the procedure provided in the Orion MRL Owner's Manual.

   When the COM and DW buttons are pressed the clutch connects the auxiliary gearmotor to the pulleys/synchronous belt system connected to the main motor of the elevator. The auxiliary gearmotor is energized rotating the shaft of the main motor of the elevator, causing the cabin to move down.

Run the elevator in normal operation and ensure there no noises coming from the manual lowering system.

Maintenance Record

Date	Time	Reason for call	Comments	Dealer

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For service or questions about this product,
please contact your installing dealer.

Dealer Name: _____

Dealer Phone: _____

Authorized Savaria Dealer

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savaria

savaria.com

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